



European Union- Thematic Strategy for Pesticides

Patrick Stephenson

Pickering, North Yorkshire, UK



If you worked here - How would you answer the phone?



EU Thematic Strategy for Pesticides

- 🔥 Aim to reduce risk to human health and the environment.
- 🔥 Comprises 4 pieces of legislation
 - Replace 91/414,
 - New sustainable use directive.
 - New statistics regulation.
 - Amend machinery directive.

Replacement for 91/414

- Zonal authorisation
- Hazard criteria
- Comparative assessment and substitution
- Abolition of national provisional authorisation (NPAs)
- Data protection

Sustainable Use Directive

- National Action Plans;
- On-going training and certificates for users, distributors and advisers;
- Sales;
- Sprayer testing;
- Protection water and other sensitive sites;
- Promotion of integrated approaches.

What Was Agreed Pesticide approvals

- “Positive list” EU approved ingredients
- Cut-off criteria banning substances that are carcinogenic, mutagenic, reprotoxic or endocrine disrupting
- Active Ingredients that are “persistent organic pollutants” banned
- Additional safety margins for actives that are neurotoxic or immunotoxic
- 5 year derogation if any of the above fail points and no alternatives exist
- Three EU zones to be established North, Central, and South

What Was Agreed Pesticide Use

- Integrated pest management established to encourage non-chemical control
- National Plans drawn up to reduce risk levels in pesticide use
- Aerial spraying band
- Spray buffer zones to be established alongside water courses
- No spraying in or near parks, schools, hospitals and playgrounds
- Compulsory training of spray operators and salesman
- All in place by 2011



UK Media Reaction

DAILY EXPRESS
THE WORLD'S GREATEST NEWSPAPER

Pesticide ban to hit food prices

THE TIMES

Crunch time for carrots as EU bans Pesticides

The Daily Telegraph

Food prices will rise after Europe votes to cut pesticides, warn Farmers

Daily Mail

Cost of vegetables set to rocket after EU restricts pesticide use

WHERE DOES THAT LEAVE EUROPE?





“This agreement is a win-win situation, not only for the environment and consumer protection, but also for the EU economy, since it will lead to more innovation”

Hiltrud Breyer German Green MEP

The top priority was – and still is – to achieve the highest possible level of protection for human and animal health, and the environment

Androulla Vassiliou EU Food Safety Advisor

“Let them eat cake.”

Marie Antoinette after being told there was a shortage of bread in Paris

Triologue compromise text for EU Parliament vote in January 2009

- **Within 4 years from the entry into force of this Regulation, the Commission shall present to the Committee referred to in Article 79 (1) a draft of the measures concerning specific scientific criteria for the determination of endocrine disrupting properties [...] to be adopted in accordance with the regulatory procedure with scrutiny referred to in Article 79(4).**

Pending the adoption of these criteria, substances, that are or have to be classified, in accordance with the provisions of Directive 67/548/EEC, as carcinogen category 3 and toxic for reproduction category 3, shall be considered to have disrupting endocrine properties.

In addition, substances, such as those that are or have to be classified, in accordance with the provisions of Directive 67/548/EEC, as toxic for reproduction category 3 and which have toxic effects on the endocrine organs, may be considered to have such endocrine disrupting properties.

- **Neurotox is a case for candidates for substitution**

Most likely active substances to fail reregistration under the December 2008 triologue agreement on the revision of 91/414 (final year of registration under 91/414)

- 2,4-D? (2011)
- Amitrole?? (2011)
- Carbendazim (2009)
- Cyproconazole?? (2020)
- Deltamethrin? (2013)
- Dimethoate? (2016)
- Dinocap (2009)
- Epoxiconazole?? (2018)
- Esfenvalerate (2011)
- Flumioxazine (2012)
- Flusilazole (not sure)
- Glufosinate (2017)
- Ioxynil?? (2015)
- Ipridione? (2013)
- Linuron (2013)
- Mancozeb?? (2016)
- Maneb?? (2016)
- Metconazole?? (2017)
- Metribuzin? (2017)
- Pendimethalin (2013)
- Picloram? (2018)
- Quinoxifen (2014)
- Tebuconazole?? (2019)
- Thiram? (2013)
- Trisulfuron? (2018)
- Warfarin (2016)
- Other triazoles?

? = endocrine disruptor on PSD assessment

?? = endocrine disruptor on both PSD and Swedish assessment

Other active substances may be subject to candidates for substitution
– particularly most insecticides

EU legislation

Revision of 91/414

Crop	Pesticide type	% loss in active substances under four proposals*			
		Commission exclusion	Commission substitution	Parliament exclusion	Parliament substitution
Wheat	Herbicide	13	37	37	84
	Fungicide	49	65	62	97
	Insecticide	26	47	92	100

- Loss of triazoles – major impact on foliar and ear diseases
- Yield loss of c. 20% in short term
- Lower yielding varieties with better disease resistance in medium term. Yield loss 5-10%.

Triazole dominance...

1964	chlorothalonil
1970	<u>mancozeb</u>
1973	<u>triadimefon</u>
1977	<u>triadimenol</u> , prochloraz
1979	<u>propiconazole</u> , <u>bitertanol</u> , <u>diclobutrazol</u>
1982	<u>triflumizole</u>
1983	<u>flutriafol</u> , <u>flusilazole</u> , <u>penconazole</u> , <u>diniconazole</u>
1986	<u>cyproconazole</u> , <u>tebuconazole</u> , <u>hexaconazole</u> , <u>myclobutanil</u>
1988	<u>difenoconazole</u> , <u>tetraconazole</u> , <u>fenbuconazole</u>
1990	<u>epoxiconazole</u> , <u>bromuconazole</u>
1992	<u>metconazole</u> , <u>fluquinconazole</u> , <u>triticonazole</u>
1997	<u>Strobilurins</u>
2002	<u>prothioconazole</u>
2005	boscalid

2009-10 New carboxamides

Life Without Triazoles

- Sprays would have to start earlier. Routine T0.
- More frequent sprays (protectant sprays)
- Shorter intervals between sprays
- Current timings inadequate
(T1 – T2 gap too long)
- Spray days / spray capacity crucial
- Variety selection would change

Seed treatments



- Bitertanol
 - Carboxin
 - Difenoconazole
 - Fludioxonil
 - Fluquinconazole
 - Fuberidazole
 - Guazatine
 - Ipconazole
 - Prochloraz
 - Prothioconazole
 - Tebuconazole
 - Thiram
 - Triadimenol
 - Triticonazole
- Bitertanol
 - Carboxin
 - Difenoconazole
 - Fludioxonil
 - Fluquinconazole
 - Fuberidazole
 - Guazatine
 - Ipconazole
 - Prochloraz
 - Prothioconazole
 - Tebuconazole
 - Thiram
 - Triadimenol
 - Triticonazole

Non-triazole seed treatments

- Carboxin / thiram
- Fludioxonil
- Guazatine

Good control of Microdochium

No control of loose smut

Little or no control of soil-borne bunt

Would need some strategic changes in seed production

Organic cropping...



Organic cropping...

- Organic wheat yields less than half conventional yields (4.0 v 8.4 t/ha).
- All UK wheat – 16,800,000 tonnes
- If all was organic – 8,000,000 tonnes
- Nearly 9 million tonnes short!
- Grass/clover swards - What do we do with all the livestock?



naturenews

Drinking water contamination mapped

Wide-ranging survey reveals low levels of some drugs and pesticides in US tap water

Where does that leave America?





ALWAYS LOOK WHERE YOU ARE GOING!



wallis
DRESS TO KILL